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ABSTRACT

This guide outlines a model for competency-based education (CBE) as well as procedures for administration of CBE programs. The model includes the following elements--publicly determined and displayed student learning outcomes, curricular changes, life role related outcomes, integrated learning experiences, and individualized instruction. Assessment tasks for the CBE program include: (1) interpreting competency statements; (2) organizing instruction; (3) designing/selecting assessment instruments/techniques; (4) administering the instrument/technique; (5) grading/scoring the instruments; (6) recording/reporting the results; and (7) reprogramming the successful and unsuccessful students. (DS)

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LEARNING TO MANAGE
A
MINIMUM COMPETENCY TESTING PROGRAM

A PAPER PREPARED FOR THE AACTE CONFERENCE

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Let me begin with a commercial about competency based education (CBE). This commercial comes from my perspective that most states and local school districts have overconcentrated on the testing aspects of CBE and have virtually ignored its powerful instructional implications. Here is the commercial!

CBE: WHAT IS IT? AND HOW CAN WE TELL IF WE HAVE IT?

Competency based education, or CBE, is now discussed more than any other educational topic in the nation. To date, some 36 states are regulating competencies (as in Oregon), or legislating them (as in California). Even where states have not acted, many schools and districts have adopted competency based education in some form.

However, despite the nationwide impulse to embrace competency based education, people lack a precise understanding of what it is. Like the blind men describing the elephant, states and districts define CBE differently, depending upon whether they grasp the trunk or the tail. Is it possible to comprehend the whole beast? An effective CBE model might have the following elements. Let's examine them.

PUBLICLY DETERMINED AND DISPLAYED STUDENT LEARNING OUTCOMES

All programs that call themselves CBE have identified some essential (minimum) learning outcomes - usually called competencies or learning objectives - but they have followed different procedures and selected different kinds of competencies. In Oregon, for instance, local districts have been asked to work with their own communities in identifying the competencies.

When community members are involved in setting educational goals, they can visibly influence the instructional process and thus share ownership of school programs. At the most pragmatic level, their positive attitude toward schools means school budget dollars from local contributions. In terms of instruction, community participation counts too. It seems reasonable to believe that students will achieve best in school programs that their parents and other adults respect and support, and when students feel that what they do has meaning and worth in the wider world of adults. Not all CBE programs involve members of the community directly, but those that do benefit from both financial and instructional advantages.

Community members not only help choose competencies, they also care about outcomes. Since competencies provide a yardstick for measuring the progress of both learners and programs, interested persons can have access to better information about performance in their schools.

CURRICULAR CHANGES

Course content, instructional methods and scheduling patterns are beginning to change as CBE programs are implemented. Bill Spady considers it especially significant that schools can use CBE to give students credit for the competence they demonstrate rather than for the time they spend in class, thus shifting the organizational pattern in schools from traditional "seat time" to achievement of educational outcomes.

Less time-dependent instruction has a sound basis in educational research. We know that the amount of time it takes to master a skill or acquire knowledge varies widely, not only among students but also for any particular person from day to day and subject to subject. Schools have always assumed that the distribution of student achievement scores along the normal curve is due to innate student ability, but Benjamin Bloom contends that it reflects the amount of instruction and time spent on tasks instead.

In fact, his research suggests that if teachers have the freedom and skills to modify instruction to meet individual needs, 85 to 95 percent of all students can match the achievement of those formerly doing "A" and "B" work. It's an encouraging thought: We really could talk about educating all the nation's children, not just the 50 percent in the middle of the curve.

LIFE ROLE RELATED OUTCOMES

Another important change in Oregon and other states is that schools are beginning to accept responsibility for forging a clear link between school skills and application of those skills in life roles. The Oregon Department of Education defines competencies as "the application of skills and knowledge assumed to contribute to success in life role functions." This means that educators are not only supposed to teach the skills students need to perform well in future schooling and on standardized tests measuring those skills, but also to help them apply their skills in real life functions. Examples of these life role competencies might include students demonstrating correct first aid techniques in household or highway emergencies, using math skills to balance a checkbook, or reading well enough to study a ballot measure in a voter's pamphlet.

INTEGRATED LEARNING EXPERIENCES

As districts begin to use competencies related to life roles, school people may discover that students have to integrate skills and knowledge from two or more disciplines to perform many of them. For the most part, courses in traditional secondary schools have been organized by disciplines, following the university model. It has been assumed that students can integrate the discrete knowledge and skills in real life situations; in fact, research at the University of Texas indicates that at least 20 percent of all adult Americans cannot pull together two sets of skills to perform tasks like selecting the best buy at a grocery store or reading and interpreting a health insurance policy.

School people may find that they need to reorganize courses to emphasize the interdisciplinary nature of life role competencies. Can physical education and social studies teachers reinforce math skills? Can science and health teachers improve reading ability? CBE programs are just beginning to deal with these issues, and some new interdisciplinary approaches are likely to emerge.

INDIVIDUALIZED INSTRUCTION

If schools agree to develop essential competencies for each student, teachers will probably need to modify some of their practices. If teachers use the same instructional materials and methods to teach the same course content in the same amount of time to an entire class, the quickest students will become bored and the slowest will become discouraged.

Teachers will need to vary their approaches, analyzing the situation at hand to decide whether to form large or small groups, or whether to direct learning or encourage inquiry. In seeking the optimum learning style for each student, teachers will need to match instructional materials and activities with individual needs and interests. Some students, for example, learn best from pictures and sound, so a good program will include film and other media.

ADAPTIVE PROGRAMS

CBE programs recognize that the needs of learners are always changing. Teachers know well that progress in learning does not occur at a constant rate or in the same sequence for each student. By using available data from assessments of student achievement of competencies and course goals, teachers and administrators have a basis for continuously modifying the instructional program for each learner and within the whole school program. In this way, school programs become adaptive in response to the changing needs of students.

Adaptations will occur not only in the curriculum and instruction side of schooling, but also in assessment and school management. Ongoing student assessment and program evaluation provide the data base to make sound instructional decisions within the school setting.

CBE: SCHOOLS FACE THE '80s

Educating all of the nation's children continues to be an urgent, complex task for American schools, which may have to meet the challenge with declining funds and staff. While CBE programs differ significantly from school to school and state to state, the common elements that we have identified seem to have great potential for improving instruction. CBE components like involvement of community members in determining the outcomes of education, instruction for students in applying their skills to life roles, credit for learning rather than for spending time in class, interdisciplinary instruction and individualizing instruction offer schools new ways to meet the diverse needs of their students.

CBE could be the bright promise of the '80s.

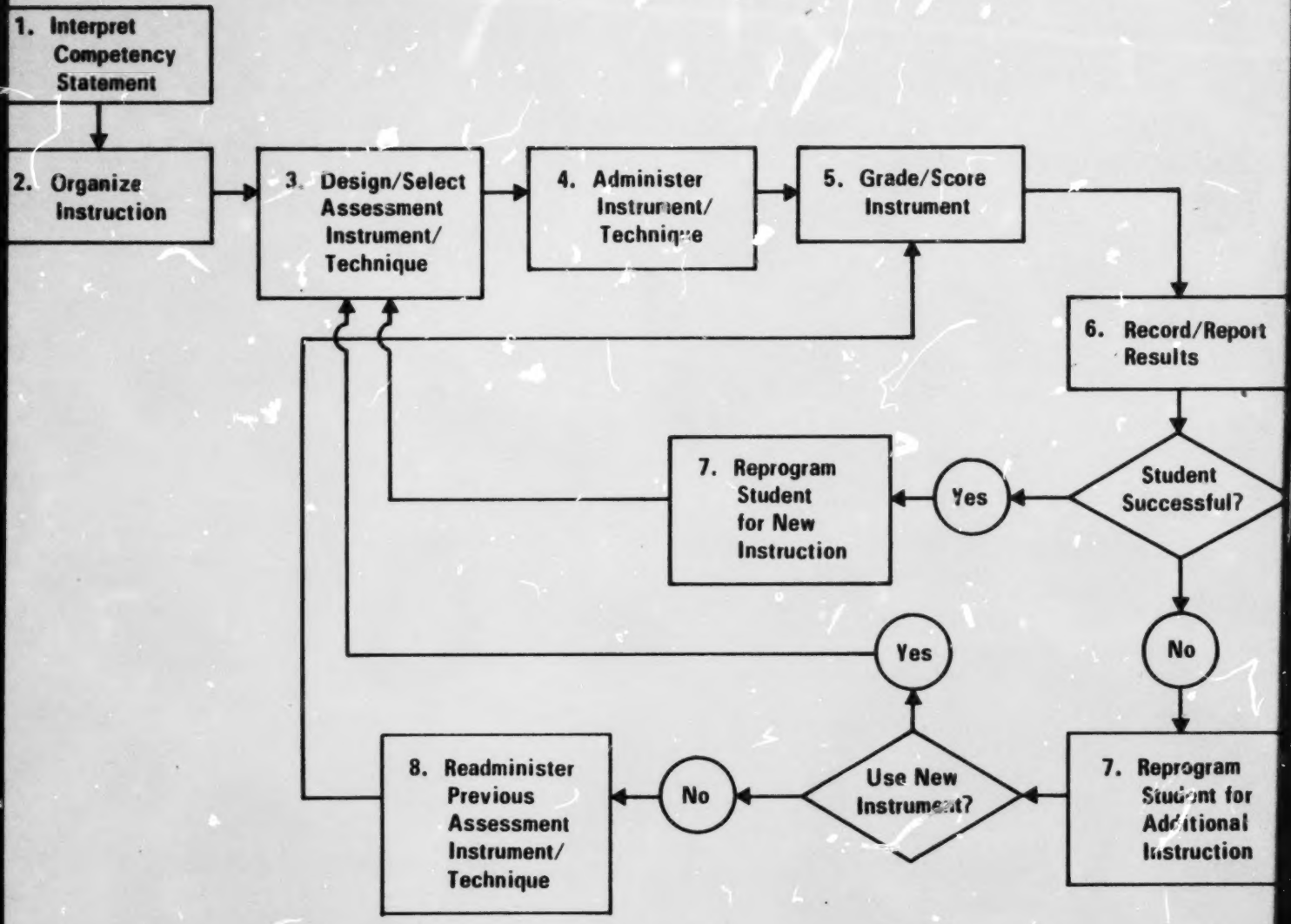
End of Commercial

So, I have agreed to speak to some of the tasks and issues involved in managing a minimum competency testing program, but you need to know that I view minimum competency testing as only one small part of the kind of a CBE program described in the commercial message above.

Here is a simplified flow chart which outlines some major tasks related to competency assessment:

SOME ASSESSMENT TASKS

FIGURE 1



As I have indicated, my view of the world tells me that most states and districts have entered the cycle at Task 3. Design/Select Assessment Instrument/Technique, designed or selected a paper and pencil test, proceeded through Task 6. Record/Report Results, and stopped!

Now, if that is your view of the world of competency assessment, then your management problems are rather simple.

- o apply various levels of rigor to the design or selection of a paper and pencil test
- o print the thing
- o schedule the time and place to inflict it on the kids
- o inflict it
- o score it
- o record the results
- o report the results to the media
- o prepare for the onslaught
- o discontinue the minimum competency testing program

If, on the other hand, you buy the importance of the 8 tasks listed in Figure 1, stick with me and we will look at some more interesting problems.

Task 1: Interpret Competency Statement
If we assume that the school district has established a list of minimum competencies expected of students, two management questions relate to Task 1.

- o What is the set of skills, knowledge and attitudes that define the competency?
- o How do we define that set so there is shared understanding of its meaning between students, teachers and parents?

If these two questions are not addressed in a thorough, comprehensive manner, you are dead in the water. Your instructional planning and your assessment instrument design/selection will be exercises in futility. Let me give you an example:

"The student can interpret charts, maps, tables and graphs" is a common minimum graduation competency throughout Oregon. One district identified 26 skills that defined that competency statement, drawing from biological science, physical science, mathematics and social science. These 26 skills served as the basis for instructional planning in the various subject areas. Further delineation or specific performance standards for students served as the basis for shared understanding between students, teachers and parents. The performance standards also become criteria for assessment instrument development. Similar analysis and interpretation was applied to each of the district's seventy minimum competency statements!

Task 2: Organize Instruction to deliver the minimum competencies is the subject for a much longer speech than time allows. Let me mention two critical management questions vis-a-vis the organization of instruction.

- o Is there a clear audit trail for each competency and related skills, both in the written curriculum and the actual instructional practices?
- o If we really expect every student to acquire a finite set of competencies, is there instructional flexibility both in terms of time and various learning opportunities?

Task 3: Design Assessment Instrument/Technique

If you are willing to accept my prejudice against traditional paper and pencil tests you might want to write:

Clearinghouse for Applied Performance Testing (CAPT)
Northwest Regional Educational Laboratory
710 S.W. Second Avenue
Portland, Oregon 97204

They will send you an annotated bibliography which will lead you to some interesting alternatives. Let me give you a few examples:

- o anecdotal records
- o content analysis
- o student drawings
- o student journals
- o simulations
- o in-basket techniques*

Now, even a cursory look at these sample assessment techniques makes it quite obvious that their use will change the nature of the work in Tasks 4, 5 and 6. Let's look at some implications for each.

Task 4: Administer Instrument/Technique

Suppose you were to use expert observation (as an alternative to a paper and pencil test) as a technique to assess the following competence:

The student can keep financial records of income and expenditures

You would need to answer these kinds of questions.

- o Who is the expert (e.g., the teacher, high school accounting students, the student's employer or the school district auditor)?
- o What are the criteria for successful keeping (e.g., 100% accuracy in mathematics, neat and tidy entries, or, perhaps, income in excess of expenditures)?
- o When do you observe (e.g., monthly, quarterly, or, perhaps, the week before graduation from high school)?
- o What about the non-employed student (e.g., do you use simulations, or, perhaps, fail this student because of lack of employment)?

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*Thomas R. Owens, "Experience-Based Learning and Assessment in a Public School System: Examples of Non-Testing Evaluation Techniques" (March 1979), mimeo.

Well, I guess I have made my point. It is easy to herd a group of students into a large hall and give them a one-shot paper and pencil test. But you get what you pay for. On the other hand, if you utilize some more interesting assessment techniques, the management tasks may be more difficult, but the payoff may be worth it.

Task 5: Grade/Score Instrument

Every time I discuss this task with assessment specialists (and I am not) we get into the question of success standards and poof! The air is filled with heated invective on validity, reliability, size of sample, norm referenced, criterion referenced and Rasch calibrations; so I quietly excuse myself and head for cooler climes. I know enough about setting the perfect success standard to know that it can't be set. If you want more ideas on this task, you will need to talk with someone else.

Task 6: Record/Report Results

If you look around at states or districts currently involved in un-paper and pencil competency assessment you will find five major recordkeeping options being exercised or considered:

1. by default
2. by exception
3. teacher grade book
4. centralized quill or computer
5. by the student

Let me talk a little about each.

A few school districts have placed the competency recordkeeping responsibility directly on the student. The student goes to the certifier, gets the certifier's sign-off in a student handbook and periodically shows the results to a clerical aide in the school building office. The aide, in turn, records the results and reports them to the appropriate audiences.

The system isn't foolproof. Students do lose things, including handbooks. But it is interesting how important that student handbook becomes when it is directly tied to progress through school.

Reporting options vary among the un-paper and pencil districts - from individual student computer printouts to an extra page on the report card - but one factor seems common: the student, the parent, the teacher and the guidance counselor all share the same understanding about student competency achievement.

Some school districts assign minimum competencies to required courses and automatically assume that course passage means achievement of the competencies assigned to the course. Once the course is passed, the competencies are achieved - by default.

Chuck Frye has proposed a system of recording competency achievement by exception. (In "Tracking and Reporting School Leaving Competencies," Northwest Regional Educational Laboratory, 710 S.W. Second Avenue, Portland, Oregon 97204.)

He suggests some unique solutions to a variety of problems we have discussed today. I commend it to you.

The teacher grade book and the building or district quill or computer center seem to be the two most popular record places. In either case, teachers are the data sources, and they do not relish the task.

Task 7: Reprogram the Successful Student for new instruction raises the same questions as Task 2, so let's not belabor that point.

Task 7: Reprogram the Unsuccessful Student for additional instruction raises some other questions.

If you deliver your minimum competencies through a traditional course or grade level structure and a student fails one or more competencies delivered in a given course or grade level must the student repeat the course or grade level? If so, are you prepared for the potential logistical, educational and political problems associated with such a procedure?

Or are you willing to explore other delivery systems such as competency centers, peer tutoring or experiential learning in the community? If so, are you prepared to deal with the potential logistical, educational and political problems associated with these procedures?

So, since minimum competency testing is such a questionable practice in the first place, when a student fails part or all of the test, you are caught between a rock and a hard place.

Task 8: Readminister Previous Instrument/Technique

or

Task 3: Design a New One

which, to quote the Sound of Music, brings us back to "dō" and the cycle starts again, raising the same questions and issues.

Learning to Manage a Minimum Competency Testing Program, in the context of a broad operational definition of competency based education, can be, perhaps even should be a complex set of tasks. If the results are to be helpful to students and teachers, the simplistic approach suggested earlier just will not do the trick.

Thank you.